

OCCUPATIONAL INJURY AND DISEASE IN ALBERTA

Forestry and Related Industries 1994 to 1998



Lost-Time
Claims
and
Claim Rates

Alberta
HUMAN RESOURCES
AND EMPLOYMENT

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1. Introduction

The Mission of Alberta Human Resources and Employment

The mission of Alberta Human Resources and Employment is to work in partnership with Albertans to promote safe and healthy workplaces, a quality working life and comprehensive health and safety systems. To this end, Alberta Human Resources and Employment recognizes that monitoring health and safety in Alberta will help to ensure that primary workplace health and safety concerns are actively managed and prioritized and resources directed where most needed.

This report summarizes the lost-time injuries and disease descriptions, characteristics of the injured worker, and the risk of injury to workers in Alberta's forest industry between the years 1994 and 1998. A summary of occupational fatalities accepted by the Workers' Compensation Board (WCB) and detailed description of those fatalities investigated by Occupational Health and Safety (OHS) are also provided. Cost of injuries and revenue in terms of insurable earning and premiums are also provided.

The Forest industry in this report include: Primary Forest Activities and Forest Product Manufacturing.

2. Primary Forest Activities

For the sake of simplicity, primary forest activities will be called forestry in this report. This activity is made up of two industries: Logging/Woodlands Operations and Timber Management.

2.1 Industry Descriptions

Logging/Woodlands Operations, Including Trucking of Logs (Industry # 03100)

The business activity of logging in Alberta relates specifically to the physical harvesting of trees. Often referred to as "stump to dump" logging, the activities comprise all elements of harvesting including the transport of logs to a mill. Logging is performed both on crown land, through various forms of timber disposition, and on private land.

Logging contractors may perform all harvest activities from cutting to delivery; however, they will often contact out specialized functions of their harvest requirements. Such specialized contractors, when active in logging contacts, are covered under this industry. This is particularly common where trucking of logs is concerned.

Logging can be performed conventionally, using chain saws and line skidders or mechanically, using equipment such as; feller bunchers, grapple skidders, delimbers, harvesters, forwarders and loaders. Both conventional and mechanical logging methods form part of this industry.

In Alberta, it has become common for mill operators to hold logging rights (generally under Forest Management Agreements-FMA's) and contract out the harvesting. The mill operators coordinate the harvesting through "woodlands administration" division. Woodlands administration refers to forest technicians, foresters and their support staff. Woodlands administration is considered to be a normal function of a mill and when conducted by the mill operator's own workers, does not require a separate classification. Woodlands administration, when conducted by the independent third parties under contract to the mill, will be classified according to the service provided, generally industry 3902.

Timber Management (Industry # 03902)

This classification is intended to cover those activities, carried on as a separate industry, that perform a service to the logging industry. Employers in this industry do no logging, sawing or handling of logs, nor do they use any equipment or tools of any significant size.

Planting of seedlings is performed with a variety of hand tools designed to punch a hole in the ground into which a seedling is placed. Check plots are performed on recently planted areas as a visual inspection intended to determine the effectiveness of the planters' work.

Regeneration Surveys are the inspection of logged areas to determine natural stocking levels. The cut block is divided into a grid pattern of equal spacing. Each point in the grid is inspected for a one square metre area in an effort to locate natural regeneration (seedling). Unstocked blocks will require planting and seedling. The only tool used in regeneration surveys are small hand rakes for clearing tall grass and debris.

Timber Cruising is a method of determining tree stand volumes, type and condition. Performed in pairs, timber cruisers follow predetermined compass bearing to arrive at numerous randomly selected plots. At the plots the timber cruisers use a variety of hand held measuring instruments to measure and record information needed to formulate harvest plans.

Block Layout is the marking of the cut block boundaries. This activity involves following predetermined compass bearing or natural stand boundaries while marking trees with seismic ribbon or spray paint.

Cone Picking is the natural gathering of cones to be used for seed. Often cone picking takes place in recently logged areas where cones are readily accessible in the remaining branches of the harvested trees.

Log Scaling is a method of determining volumes of harvested trees. Log scalers often work at the unloading deck of a mill but may scale logs at individual cut block landings. Using a calibrated measuring stick and a can of spray paint, the scaler determines wood volumes.

Stand Tending is the process where competing vegetation is removed from immature stands to allow for optimum growing conditions. Small trees and vegetation are removed at predetermined spacing using brush cutters. This is a pre-commercial form of thinning. Power saws (chainsaws) are not to be included in this classification.

Injury and Disease Analysis Summary

In 1998,

- ☛ Estimated person-years rose by 3.4% to 5,564 from 1997. The total lost-time claims(LTCs) however reduced by 5.8% resulting in a 8.9% reduction in the LTC rate to 4.1 per 100 person-years.
- ☛ About 74% of the injuries and diseases were in the logging and woodlands operation.
- ☛ The duration rate(215) for this activity was more than twice the provincial value of 93.
- ☛ About 26% of the claimants were young workers (15-24 years) and 48% of the claimants were new at their jobs (less than 6 months) before their injury or disease.
- ☛ The trunk, including the back, was the most injured body part.
- ☛ Majority (32%) of the claimants were truck drivers.
- ☛ Sprain and strain was by far the leading nature of injury or disease, accounting for about 37% of all the injuries and disease.

3. Lost-Time Claim Rates & Duration Rates

Forestry

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	2,674	\$1,571,045	5,502	12,299	224	263	4.8
1995	3,120	\$1,886,703	5,936	15,155	255	261	4.4
1996	2,964	\$1,832,357	5,254	14,997	285	248	4.7
1997	2,822	\$2,077,085	5,379	12,866	239	241	4.5
1998	2,785	\$1,458,379	5,564	11,956	215	227	4.1

3.1 Lost-Time Claim Rates & Duration Rates By Industry

3100-Logging/Woodland Operations

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	2,572	\$1,460,604	4,915	10,737	218	181	3.7
1995	3,004	\$1,536,569	5,284	13,051	247	193	3.7
1996	2,839	\$1,711,024	4,524	13,194	292	179	4.0
1997	2,691	\$1,961,420	4,610	11,465	249	188	4.1
1998	2,651	\$1,350,038	4,768	10,123	212	167	3.5

3902-Timber Management

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	102	\$110,440	587	1,562	266	82	14.0
1995	116	\$350,134	652	2,104	323	68	10.4
1996	125	\$121,333	730	1,803	247	69	9.4
1997	131	\$115,665	769	1,401	182	53	6.9
1998	134	\$108,341	796	1,833	230	60	7.5

3.2 Forestry LTC Rates by Size¹ of Employer: 1998

Size of Employer	# of Accounts	LTCs	Person - Years	LTC Rate
A: 0 < PYs <= 1	1,776	38	715	5.3
B: 1 < PYs < 5	524	58	1,168	5.0
C: 5 <= PYs < 10	95	22	646	3.4
D: 10 <= PYs < 20	55	20	764	2.6
E: 20 <= PYs < 40	32	38	933	4.1
F: 40 <= PYs < 100	15	38	752	5.1
G: PYs >= 100	4	9	586	1.5
H: Invalid	284	4	0	N/A
Total	2,785	227	5,564	4.1

¹ Size is measured in terms of estimated person-years (PYs)

4. Analysis Of Lost-Time Claims In Forestry

4.1 Nature of Injury

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
SPRAIN, STRAIN	89	80	76	80	83	408	32.9
FRACTURE & DISLOCATION							
FRACTURE	42	38	36	40	35	191	15.4
OTHER NATURE	1	3	3	6	5	18	1.5
SUBTOTAL	43	41	39	46	40	209	16.9
BRUISE, CONTUSION, CRUSHING	28	34	45	37	28	172	13.9
CUT, LACERATION, PUNCTURE	34	35	18	28	20	135	10.9
OTHER INJURY	6	6	22	13	13	60	4.8
OTHER DISEASE	8	5	12	10	10	45	3.6
INFLAMED/IRRITATED JOINTS, ETC.	14	10	6	5	8	43	3.5
MULTIPLE INJURIES	12	13	4	4	5	38	3.1
SCRATCH, ABRASION	7	9	10	2	5	33	2.7
ALL OTHER NATURES, UNS	22	28	16	16	15	97	7.8
Total	263	261	248	241	227	1,240	100.0

4.2 Part of Body Affected

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
BACK							
LUMBAR (LOWER BACK)	31	30	4	7	9	81	6.5
OTHER PART	22	17	32	45	30	146	11.8
SUBTOTAL	53	47	36	52	39	227	18.3
LEG(S)							
KNEE	22	22	26	23	19	112	9.0
LOWER LEG	16	6	15	7	5	49	4.0
OTHER PART	7	8	9	10	3	37	3.0
SUBTOTAL	45	36	50	40	27	198	16.0
OTHER TRUNK							
SHOULDER(S)	17	11	15	20	18	81	6.5
CHEST-INCLUDES INTERNAL ORGANS	10	7	9	11	11	48	3.9
HIP(S)-INCLUDES PELVIC ORGANS	7	6	5	4	3	25	2.0
OTHER PART	5	1	3	.	6	15	1.2
SUBTOTAL	39	25	32	35	38	169	13.6
ANKLE(S) & FOOT(FEET)-NOT TOES							
ANKLE(S)	12	17	17	18	20	84	6.8
FOOT(FEET)-NOT ANKLES OR TOES	9	15	15	10	9	58	4.7
SUBTOTAL	21	32	32	28	29	142	11.5
WRIST(S) & HAND(S)-NOT FINGERS							
HAND(S)-NOT WRISTS OR FINGERS	12	13	8	6	13	52	4.2
WRIST(S)	13	10	10	6	10	49	4.0
SUBTOTAL	25	23	18	12	23	101	8.1
OTHER HEAD, NECK							
NECK	7	14	6	9	9	45	3.6
OTHER PART	10	15	7	10	4	46	3.7

(CONTINUED)

Part of Body Affected(continued)

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
OTHER HEAD, NECK							
SUBTOTAL	17	29	13	19	13	91	7.3
FINGER(S)	17	18	17	16	19	87	7.0
MULTIPLE MAJOR BODY PARTS	8	15	20	9	12	64	5.2
EYE(S)-OPTIC NERVE, VISION	9	10	12	2	9	42	3.4
ARM(S) (ABOVE WRIST)	5	11	4	11	10	41	3.3
FACE	12	8	4	8	3	35	2.8
ALL OTHER PARTS, UNS	12	7	10	9	5	43	3.5
Total	263	261	248	241	227	1,240	100.0

4.3 Source of Injury

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
PLANTS, TREES, VEGETATION	45	47	57	44	32	225	18.1
SOURCE-UNS	42	43	48	53	38	224	18.1
VEHICLES							
HIGHWAY VEHICLES (POWERED)	23	35	20	24	21	123	9.9
ALL TERRAIN VEHICLES	6	6	5	6	3	26	2.1
OTHER SOURCE	4	10	6	7	5	32	2.6
SUBTOTAL	33	51	31	37	29	181	14.6
BODILY MOTION	30	26	24	25	30	135	10.9
WORKING SURFACES							
GROUND (OUTDOORS)	13	16	18	17	21	85	6.9
OTHER SOURCE	6	7	9	8	14	44	3.5
SUBTOTAL	19	23	27	25	35	129	10.4
HANDTOOLS-POWERED							
CHAIN SAW	12	9	5	9	3	38	3.1
OTHER SOURCE	6	4	5	4	2	21	1.7
SUBTOTAL	18	13	10	13	5	59	4.8
WOOD ITEMS-NEC							
LOGS	17	13	.	.	.	30	2.4
OTHER SOURCE	7	4	1	5	1	18	1.5
SUBTOTAL	24	17	1	5	1	48	3.9
HANDTOOLS-UNPOWERED	9	10	7	7	11	44	3.5
MACHINES	12	3	10	7	7	39	3.1
METAL ITEMS-NEC	2	6	8	6	6	28	2.3
ALL OTHER SOURCES	29	22	25	19	33	128	10.3
Total	263	261	248	241	227	1,240	100.0

4.4 Type of Event

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
STRUCK BY							
STRUCK BY FLYING OBJECT	3	11	34	27	22	97	7.8
STRUCK BY FALLING OBJECT-NEC	21	22	.	.	.	43	3.5
OTHER TYPE	61	39	27	26	14	167	13.5
SUBTOTAL	85	72	61	53	36	307	24.8
VEHICLE INCIDENTS							
HIGHWAY-OVERTURNED VEHICLE	11	19	6	9	10	55	4.4
OTHER TYPE	14	16	20	20	13	83	6.7
SUBTOTAL	25	35	26	29	23	138	11.1
BODILY REACTION							
REACTION FROM VOLUNTARY MOTION	24	15	4	10	11	64	5.2
REACTION FROM INVOLUNTARY MOTION	6	8	14	9	10	47	3.8
OTHER TYPE	.	3	7	6	8	24	1.9
SUBTOTAL	30	26	25	25	29	135	10.9
OVEREXERTION							
LIFTING OBJECTS	11	7	8	7	9	42	3.4
OTHER TYPE	13	16	14	16	14	73	5.9
SUBTOTAL	24	23	22	23	23	115	9.3
FALL ON SAME LEVEL							
FALL TO WALKWAY, WORKING SURFACE	7	11	13	11	14	56	4.5
FALL ONTO OR AGAINST OBJECTS	14	6	8	7	5	40	3.2
OTHER TYPE	1	1	.	.	2	4	0.3
SUBTOTAL	22	18	21	18	21	100	8.1
FALL FROM ELEVATION							
FALL FROM VEHICLES	10	11	9	9	10	49	4.0
OTHER TYPE	5	8	11	10	14	48	3.9

(CONTINUED)

Type of Event(continued)

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
FALL FROM ELEVATION							
SUBTOTAL	15	19	20	19	24	97	7.8
CAUGHT IN, UNDER OR BETWEEN	12	16	12	12	12	64	5.2
STRUCK AGAINST	7	9	11	11	9	47	3.8
ALL OTHER TYPES, UNS	43	43	50	51	50	237	19.1
Total	263	261	248	241	227	1,240	100.0

4.5 Duration of Disability

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
01 - 05 DAYS LOST	49	46	52	52	41	240	19.4
06 - 10 DAYS LOST	42	35	35	29	27	168	13.5
11 - 15 DAYS LOST	30	23	10	19	15	97	7.8
16 - 20 DAYS LOST	14	10	8	10	16	58	4.7
21 - 30 DAYS LOST	26	26	20	19	24	115	9.3
31 - 40 DAYS LOST	19	13	17	25	11	85	6.9
41 - 50 DAYS LOST	10	13	16	8	13	60	4.8
51 OR MORE DAYS LOST	66	90	85	74	74	389	31.4
DAYS LOST-UNSPECIFIED, 0	7	5	5	5	6	28	2.3
Total	263	261	248	241	227	1,240	100.0

5. Characteristics Of The Injured Worker

5.1 Occupation of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
FORESTRY & LOGGING							
LABOR-FORESTRY & LOGGING	54	49	48	41	44	236	19.0
TIMBER CUTTING	38	32	23	24	18	135	10.9
FORESTRY & LOGGING-NEC	18	24	9	10	9	70	5.6
LOG HOISTING, SORTING, & MOVING	15	5	9	13	7	49	4.0
OTHER OCCUPATION	5	2	6	3	2	18	1.5
SUBTOTAL	130	112	95	91	80	508	41.0
TRANSPORT OPERATORS							
TRUCK DRIVERS	50	65	64	71	73	323	26.0
OTHER OCCUPATION	1	1	.	.	1	3	0.2
SUBTOTAL	51	66	64	71	74	326	26.3
FARMING, FISHING & HUNTING	9	10	4	7	8	38	3.1
CONSTRUCTION OCCUPATIONS	6	4	3	6	11	30	2.4
ALL OTHER OCCUPATIONS, UNS	67	69	82	66	54	338	27.3
Total	263	261	248	241	227	1,240	100.0

5.2 Age of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
15-19 YEARS	20	20	17	10	14	81	6.5
20-24 YEARS	68	56	57	45	44	270	21.8
25-34 YEARS	87	84	79	65	58	373	30.1
35-44 YEARS	37	52	54	71	62	276	22.3
45-54 YEARS	38	29	29	35	28	159	12.8
55-64 YEARS	12	16	8	12	15	63	5.1
65 YRS AND OVER	1	2	3	2	5	13	1.0
AGE-UNSPECIFIED	.	2	1	1	1	5	0.4
Total	263	261	248	241	227	1,240	100.0

5.3 Length of Time Employed

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
A. LESS THAN 1 MONTH	73	71	65	54	40	303	24.4
B. 1 MONTH TO < 6 MONTHS	103	100	75	71	68	417	33.6
C. 6 MONTHS TO < 1 YEAR	14	19	10	12	10	65	5.2
D. 1 YEAR OR MORE	20	27	22	30	57	156	12.6
E. TIME-UNSPECIFIED	53	44	76	74	52	299	24.1
Total	263	261	248	241	227	1,240	100.0

5.4 Gender of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
MALE	238	237	222	221	201	1,119	90.2
FEMALE	22	22	17	17	20	98	7.9
GENDER-UNSPECIFIED	3	2	9	3	6	23	1.9
Total	263	261	248	241	227	1,240	100.0

6. Number of Employers That Received/Renewed A CoR In 1998

	Certified Employers	Cert. & Uncert. (# of Accounts)	% Certified
Industry 03100-Logging/Woodlands Operations	27	2,651	1.0%
Industry 03902-Timber Management	2	134	1.5%
Forestry	29	2,785	1.0%

7. Cost of Claims, Payroll, & Premiums

7.1 Forestry Costs

	Occurrence Year				
	1994	1995	1996	1997	1998
Transaction Year					
1994	\$1,287,347				
1995	\$1,208,449	\$1,599,819			
1996	\$661,538	\$864,906	\$1,580,485		
1997	\$856,131	\$686,346	\$727,457	\$1,674,233	
1998	\$547,534	\$435,300	\$582,091	\$1,081,704	\$1,161,389
Total Cost	\$4,560,999	\$3,586,371	\$2,890,033	\$2,755,937	\$1,161,389

Total Payroll	\$125,204,543	\$138,695,284	\$132,133,514	\$146,401,492	\$158,522,762
Total Premiums	\$13,735,654	\$11,858,283	\$7,619,792	\$7,108,176	\$6,367,180

The above claim cost, total payroll and premiums are for the five year period 1994 through 1998. The data is as at July, 1999.

The Claim cost amount reflect only paid cost on claims which have occurred in the five year period. These cost are tracked by year of occurrence and year that the cost were transacted. These cost are incomplete since workers compensation claim may take many years to be closed.

The payroll have been totalled for a year. The premium is the total employer's premium paid for the year.

8. Forestry WCB Accepted Occupational Fatalities

A WCB accepted occupational fatality is the death of a worker which results from a work-related incident or exposure and which has been accepted by the WCB for compensation. Alberta Human Resources and Employment classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

Motor Vehicles Incidents

Motor vehicles incidents typically involve a non-industrial vehicles operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving air plane crashes, train crashes, helicopter crashes etc.

Workplace Incidents

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that Alberta Human Resources and Employment typically investigates.

Occupational Disease

Occupational disease fatalities consist mostly of diseases known to be primarily or exclusive work-related. Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Claims accepted for compensation in a particular year does not mean the event or exposure happened in that year.

Description of Forestry Fatalities Accepted by The WCB Alberta, 1993-1998

Year	Occupational Disease		Motor Vehicle incident		Workplace Incident		Total	
	N	%	N	%	N	%	N	%
1993	0	0	0	0	0	0	0	0
1994	0	0	0	0	2	100.0	2	100
1995	1	33.3	0	0	2	66.7	3	100
1996	1	33.3	0	0	2	66.7	3	100
1997	0	0	1	25.0	3	75.0	4	100
1998	0	0	1	100.0	0	0	1	100
Total	2	15.4	2	15.4	9	69.2	13	100

9. OHS Investigated Occupational Fatalities, 1994-1998

Forestry (10)

YEAR:	1994	FILE:	0782
OCCUPATION:	Logger	AGE:	35
INDUSTRY:	Logging, Woodland Operations		
EXPERIENCE:	Approximately 3 years		

DESCRIPTION: The worker had been removing trees from his LTP. He was working alone at the time of the accident. Circumstances indicate he was topping a fallen tree and was struck by another large poplar tree. The premise is the tree had been partially cut and not felled at the time. Later a gust of wind toppled it onto the worker.

YEAR:	1994	FILE:	0795
OCCUPATION:	Equipment Operator	AGE:	39
INDUSTRY:	Logging, Woodlands Operations		
EXPERIENCE:	4 years		

DESCRIPTION: A worker was fatally injured when he was crushed in a tree harvester's processing head. The worker, employed in a tree harvesting operation, was operating a track excavator machine fitted with a Lake Tree processor on its boom. The machine is used to fall, delimb, and top trees. The processor includes a saw, grapple arms, feed rolls, delimbing knives and an onboard computer. Part of the computer's function is to record the length of a tree as the top is cut off. This function is done by means of a length encoder located in the processing head. On the day of the incident, the length encoder stopped functioning properly and repairs were required. The worker, who was alone at the time, positioned the processing head on the ground, parked the machine and began to change the encoder. In order to change the encoder, the worker positioned himself in the bight of the processing head and removed the defective encoder. It appears while he was attempting to install a new encoder, an electrical short occurred causing the processing head's arms to close, crushing the worker.

YEAR:	1995	FILE:	0801
OCCUPATION:	Truck Driver	AGE:	30
INDUSTRY:			
EXPERIENCE:	12 Years		

DESCRIPTION: A worker was fatally injured when he was crushed in the cab of a logging truck. The loaded logging truck was coming down a 5% grade and the driver was attempting to negotiate a sharp right curve. The truck went off the road on the left and rolled over landing in the creek bed on the north side of the road. The road surface was icy due to weather conditions.

YEAR:	1995	FILE:	0812
OCCUPATION:	Log Loader	AGE:	45
INDUSTRY:	Logging, Woodlands Operations		
EXPERIENCE:	20 Years		

DESCRIPTION: The worker was unloading a log loader from a sixteen-wheel tractor trailer unit. He was walking the loader off the trailer when the unit shifted ahead as it descended the beaver-tailed trailer. The sudden

shift of the loader caused the front tracks of the unit to contact the ground and the unfastened cab of the loader struck the ground. The worker sustained injuries that later resulted in his death

YEAR: 1995
OCCUPATION: Chainsaw Operator
INDUSTRY: Forestry
EXPERIENCE: 10 years

FILE: 0823
AGE: 28

DESCRIPTION: The company was harvesting trees on private land. The operation consisted of one faller, falling trees with chainsaw, two workers operating mechanical wheeled skidder and two workers limbing, topping and cutting trees into lengths. The worker was employed as a chainsaw operator falling trees in a logging operation. The worker notched and put the falling cut in a large poplar tree. The tree, instead of falling, leaned back against the falling cut and remained standing. The worker then moved about 30 metres from the partially cut tree and started the notch in another tree. While he was bent over cutting the notch, the partially cut tree fell, striking the worker causing fatal injuries.

YEAR: 1996
OCCUPATION: Faller
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: 20 years

FILE: 0829
AGE: 51

DESCRIPTION: The faller was cutting trees in an area of mature growth. There were several large black poplar trees, which appeared partially rotten and stumps in the area showed varying quality of cut. The faller cut one tree and it was moved to the south with the skidder. The employer moved the skidder to the south. The faller cut the second tree and the faller moved away to the south to clear the area. The falling spruce tree hit a poplar tree, knocking off the top portion, which fell and struck the faller, fatally injuring him.

YEAR: 1997
OCCUPATION: Equipment Operator
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: Two years

FILE: 0851
AGE: 36

DESCRIPTION: The slasher is a large machine used to cut trees into log lengths. The slasher consists of an operators cab, a log grapple, a log deck and a large saw used to cut the trees. Two workers were preparing to remove a portion of a broken saw guard. The injured worker had positioned himself up on the frame of the saw, when the other worker activated the saw to move it up onto the slasher deck. When the saw was activated, the worker was crushed between the moving saw frame and the fixed saw guard.

YEAR: 1997
OCCUPATION: Faller
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: Two years

FILE: 0853
AGE: 28

DESCRIPTION: A hand faller's chainsaw became stuck in a tree and he called a skidder over to push the tree so he could dislodge the saw. The skidder operator backed his machine into the tree, and in doing so, his left front tire contacted a 7-metre high dry snag, knocking it over and onto the faller who was standing 5 metres behind and to the left of the skidder. The faller received fatal head and crushing injuries.

FORESTRY

YEAR: 1997
OCCUPATION: Tree Faller
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: 33 years

FILE: 0869
AGE: 60

DESCRIPTION: The worker was a member of a crew of workers harvesting trees in a logging operation. He was operating a chain saw falling trees. He cut a large pine tree which was supporting a leaning dry snag. When the tree that he cut fell, the dry sang came down striking the worker on his head causing fatal injuries.

YEAR: 1998
OCCUPATION: Truck Driver
INDUSTRY: Logging, Woodlands Operations, including
Trucking of Logs
EXPERIENCE: 5 years

FILE: 0889
AGE: 29

DESCRIPTION: The logging truck was loaded with three rows of short logs measuring from 3.6 to 4.8 metres in length. The truck was travelling down a grade and the driver failed to negotiate a curve near the bottom of the grade. The truck left the road and rolled over, coming to rest upside down in a creek bed beside a bridge. The driver was pinned in the cab of the truck and died from his injuries.

10. Forest Product Manufacturing

This section provide a comprehensive picture of workplace health and safety in Alberta's Forest Products Manufacturing industry. Information on cost of injuries, total payroll and premiums information are also presented. The number of employers that received a Certificate Of Recognition (CoR) as a result of an external audit in 1998 are also provided.

Description of Forest Product Manufacturing Industries:

Employers in this activity may be classified into the following industries:

Sawmills and Planing Mills, Manufactures of Wood Products, Peeling and Pointing of Post, Wood Preserving, Pulp Mills, and Plywood, Chipboard, Strand board and Fibreboard Mills.

10.1 Industry Description

Sawmills & Planing Mills (Industry # 25100)

This classification involves sawing logs into rough lumber of various imperial and metric dimensions.

Sawmills vary from one man portable mills to large automated mills employing in excess of 100 personnel. Labour is performed largely by those trained on the job and would include equipment operators, sawyers, scalers and labourers. Large mills will employ mechanics, millwrights, welders, etc.

Logs are trucked to the mill, often weighed, off loaded and then scaled. The size of the mill may dictate the complexity of the sawing process. Logs may be trimmed to length, debarked in a variety of debarking machines, and then sawn lengthwise into a "cant" (squared timber). The cant is further reduced into rough lumber by an edger. These processes may be manual in the case of portable mills, or highly automated using conveyers, pickers, and computer/laser guided saws in large mills.

Planing mills often accompany the large sawmill and function as a final cutting process for the lumber.

Various forms of specialized re-manufacturing also forms part of this industry. This may involve cutting of grooves, bevels, edges, and may include cutting special edges on the boards such as tongue and grooves or ship lap. Re-manufacturing lumber to metric sizes for overseas markets is also prevalent in this industry.

The restoration of railway ties and the manufacture of wooden shakes are activities also included in this industry.

Manufacturing of Wood Products (Industry # 25401)

Manufacturing includes cutting wood to specification, assembling and finishing the product.-big and small. Activities include, but is not limited to, planing, sawing, cutting, tonguing, grooving, nailing, screwing, gluing, clamping, filling, sanding and staining or painting of product big or small.

When installing their own product, it forms part of the employer's primary manufacturing activity. This industry may include a store front operations to sell related products and include relevant personnel and delivery. A showroom or display area may exist to present sample products.

Business may utilize saws, lathes, planers glue machines, handtools, forklifts, trucks and dust-collection equipment. A typical job mix may include carpenter-types, handymen, laborers, sales/estimators etc.

Peeling & Pointing of Post (Industry # 25900)

This industry covers businesses which perform the peeling and pointing of post exclusive of other lumber milling operations.

Post of uniform length are fed into a machine that rotates them much the same as a lathe at the same time peeling the bark off. One end is then ground to a point using a post pointer. The post are usually dip-treated following the peeling and pointing.

The posts peeled and pointed in this industry are generally smaller and used by farmers, ranchers or acreage owners, although the peeling and treating of telephone poles are also included in this industry.

Treating of Timber (Industry # 25901)

This classification involves the coating of wood with a preservative, including items such as fence posts, hydro poles bridge timbers and railroad ties.

Some employers in this industry are involved only in dip-treating posts and poles. The product is immersed in a preservative solution in an open tank. Square cedar post for fences are usually treated on one end only.

Another, more elaborate process uses large cylinders (often seven feet in diameter and 150 feet long). The ties, timber, post or poles to be treated are strapped to small rail carts then loaded into cylinders. The timber is then subject to pressure and heat while being treated with the appropriate preservative. Following the prescribed time (which varies by product), the preservative solution is pumped out and the timber is then vacuum dried. The timber then leaves the cylinder and moved to a temporary storage area to drip dry. Pressure treaters usually have the capacity to peel, cut and incise their product using variety of machinery and hand tools. Some pressure treaters will slightly modify the product by predrilling holes for hardware, cutting special ends and cutting out defective areas.

The two most common preservatives are Chromated Copper Arsenate (CCA) and Pentachlorophenol (Penta).

Pulp Mills(Industry # 27102)

This industry covers the actual conversion of wood to wood pulp, generally to be used in paper manufacturing operations. This industry will include the manufacturing of newsprint, either done in conjunction with wood pulp manufacturing or as a separate business.

There are two types of pulp manufacturing:

- bleached kraft pulp mills, and
- chemithermomechanical pulp mills(CTMP)

Bleached kraft pulp mills rely on chemical processes to break down wood into pulp. CTMP mills rely on the mechanical grinding process to break down wood into pulp. The pulp is compressed into 3 cubic ft. cubes/bundles and shipped to paper mills which convert the pulp to paper.

All activities from receiving the logs to processing into pulp, processing into paper, shipping the finished product and marketing is included in this industry.

Changes in technology may introduce new methods of converting wood into paper; however, such process will still remain classified as pulp mills.

Plywood, Chipboard, Strandboard & Fibreboard Mills (Industry # 27103)

This industry generally incorporates lumber processing other than sawmills and pulpmills. Included is plywood, chipboard, strandboard and fiberboard mills.

Chipboard, Strandboard and Fibreboard:

Spruce and aspen logs are cut to 2' and 3' length, then moved by conveyor to a machine that slices them into small chips or wafers. The chips are conveyed to a rotating dryer where moisture is removed, then to a chamber, where a mixture of glues and waxes is sprayed onto the chips.

The chips are dropped into trays 16' long by 4' wide which move to a heated press. Once in place, the trays (and chips) are pressed and heated to bond the chips into a board. 8' by 4' sheet are then cut and passed to a dryer where they are rotated until cool, then stacked and prepared for shipment.

With fibreboards, it is the fibres being pressed into board rather than chips or wafers. Otherwise the processes are similar.

Plywood:

Trees (mostly white spruce) are debarked and cut into peelers (8' 6" long), sorted and conditioned or steamed for 10 to 35 hours. The logs are then placed on a lathe and strips of veneer are peeled off from 1/10 to 1/8 inch thick. A clipper cuts out any defects, the veneer is trimmed and sent to the plywood mill. At the mills the sheets are sorted into grades, then lined up in presses. The interior cross banding (narrow strips) are glued on both sides and placed by hand between the layers. The sheets are glued and built up to required thickness. The ends are trimmed and the

units are placed in a loading basket and put in the hot press automatically.

Employers who paint or stain board products are also included in this industry. Staining is a simple process of passing a board through a mechanical stainer (often called an Olympic Stainer). The stainer will apply stain (or paint) to both sides and the edges of the board. Boards are then stacked to dry. This entire process can be handled by one person.

This industry encompasses all related activities including the wholesaling and warehousing of board products.

Summary of Injury and Disease Analysis

In 1998,

- ☛ The lost time claim rate reduced by 3.4% to 5.7 per 100 person-years from 5.9 in 1997.
- ☛ With the exception of Pulp Mills and Manufacturing of Plywoods, Fiberboard and Strandboard, all industries in forest product manufacturing had a rate higher than the provincial value. The Peeling and Pointing of Post industry had the highest rate of 10.8
- ☛ In terms of person-years, Manufacturing of Wood Products was the largest.
- ☛ Majority of the claimants were between the ages 25-44 years.
- ☛ Apart from labourers, wood and cabinet makers made up a large proportion of the lost-time claimants.
- ☛ Injuries to the wrist, hands and fingers accounted for 31% of the claims while back injuries accounted for 22%.
- ☛ 37% of the injuries and disease were sprains and strains while overexertion while manoeuvring objects led all other events or exposure.

11. Injury and Disease Statistics

All Forest Product Manufacturing

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	891	\$3,251,219	16,525	23,120	140	953	5.8
1995	950	\$2,541,702	17,988	21,603	120	891	5.0
1996	929	\$2,609,430	20,534	19,228	94	1,013	4.9
1997	954	\$3,809,259	22,030	27,477	125	1,293	5.9
1998	961	\$4,287,490	23,853	29,573	125	1,357	5.7

11.1 LTC Rates & Duration Rates by Industry

25100-Sawmills & Planing Mills

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	273	\$1,538,589	5,284	9,497	180	317	6.0
1995	295	\$981,574	5,189	7,683	148	319	6.1
1996	311	\$911,452	5,940	7,149	120	302	5.1
1997	308	\$1,358,591	6,474	9,424	146	359	5.5
1998	290	\$1,311,238	6,056	8,178	135	361	6.0

25401-Manufacturing of Wood products

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	565	\$1,146,310	6,783	11,997	177	554	8.2
1995	592	\$1,372,848	6,767	12,657	187	500	7.4
1996	563	\$1,198,482	8,229	10,540	128	624	7.6
1997	589	\$1,896,641	10,479	15,792	151	823	7.9
1998	613	\$2,366,555	11,163	19,181	172	882	7.9

25900-Peeling and Pointing of Post

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	20	\$10,005	70	133	N/A	8	11.5
1995	21	\$14,213	72	157	N/A	4	5.6
1996	18	\$18,116	63	228	N/A	8	12.6
1997	19	\$47,360	63	443	N/A	9	14.3
1998	19	\$52,383	56	308	N/A	6	10.8

25901-Treating of Timber

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	5	\$16,407	108	130	N/A	8	7.4
1995	6	\$28,400	140	232	N/A	13	9.3
1996	5	\$16,646	88	136	N/A	5	5.7
1997	4	\$44,151	93	248	N/A	13	14.0
1998	4	\$5,876	89	66	N/A	8	8.9

27102-Pulp Mills

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	12	\$452,798	2,629	775	29	54	2.1
1995	13	\$63,240	3,911	238	N/A	28	0.7
1996	13	\$51,642	4,201	283	N/A	28	0.7
1997	15	\$95,549	2,799	444	16	38	1.4
1998	15	\$201,089	4,103	663	16	38	0.9

27103-Plywood/Chipboard/Strandboard

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1994	16	\$87,109	1,652	588	N/A	12	0.7
1995	23	\$81,427	1,910	636	N/A	27	1.4
1996	19	\$413,092	2,013	892	44	46	2.3
1997	19	\$366,968	2,122	1,126	53	51	2.4
1998	20	\$350,350	2,186	1,177	54	62	2.8

11.2 Forest Product Manufacturing LTC Rates by Size² of Employer: 1998

Size of Employer	# of Accounts	LTCs	Person - Years	LTC Rate
A: 0< PYs <=1	332	19	148	12.8
B: 1 < PYs < 5	233	48	587	8.2
C: 5 <= PYs < 10	97	54	693	7.8
D: 10 <= PYs < 20	78	106	1,047	10.1
E: 20 <= PYs < 40	57	153	1,621	9.4
F: 40 <= PYs < 100	43	214	2,606	8.2
G: PYs >=100	54	761	16,952	4.5
H: Invalid	69	2	0	N/A
Total	961	1,357	23,653	5.7

² Size is measured in terms of estimated person-years (PYs)

12. Analysis of the Lost-Time Claims

12.1 Nature of Injury

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
SPRAIN, STRAIN	339	313	352	485	507	1,996	36.2
CUT, LACERATION, PUNCTURE	183	163	189	223	217	975	17.7
BRUISE, CONTUSION, CRUSHING	138	126	150	155	186	755	13.7
FRACTURE & DISLOCATION							
FRACTURE	85	91	81	134	130	521	9.5
OTHER NATURE	6	3	4	15	14	42	0.8
SUBTOTAL	91	94	85	149	144	563	10.2
OTHER INJURY							
AMPUTATION, ENUCLEATION	13	13	17	40	50	133	2.4
OTHER NATURE	16	21	62	78	87	264	4.8
SUBTOTAL	29	34	79	118	137	397	7.2
SCRATCH, ABRASION	25	24	41	41	41	172	3.1
INFLAMED/IRRITATED JOINTS, ETC.	30	30	21	39	44	164	3.0
OTHER DISEASE	29	24	31	30	25	139	2.5
ALL OTHER NATURES, UNS	89	83	65	53	56	346	6.3
Total	953	891	1,013	1,293	1,357	5,507	100.0

12.2 Part of Body Affected

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
BACK							
LUMBAR (LOWER BACK)	145	124	51	42	34	396	7.2
THORACIC (UPPER BACK)	13	19	14	36	31	113	2.1
OTHER PART	60	58	170	221	237	746	13.5
SUBTOTAL	218	201	235	299	302	1,255	22.8
FINGER(S)	191	178	180	251	265	1,065	19.3
WRIST(S) & HAND(S)-NOT FINGERS							
HAND(S)-NOT WRISTS OR FINGERS	72	56	68	88	80	364	6.6
WRIST(S)	45	43	45	60	79	272	4.9
SUBTOTAL	117	99	113	148	159	636	11.5
OTHER TRUNK							
SHOULDER(S)	50	41	47	71	64	273	5.0
CHEST-INCLUDES INTERNAL ORGANS	22	22	35	27	36	142	2.6
HIP(S)-INCLUDES PELVIC ORGANS	24	20	26	32	25	127	2.3
OTHER PART	12	15	6	14	15	62	1.1
SUBTOTAL	108	98	114	144	140	604	11.0
ANKLE(S) & FOOT(FEET)-NOT TOES							
ANKLE(S)	37	53	57	67	55	269	4.9
FOOT(FEET)-NOT ANKLES OR TOES	48	32	36	44	59	219	4.0
SUBTOTAL	85	85	93	111	114	488	8.9
LEG(S)							
KNEE	45	36	49	59	65	254	4.6
OTHER PART	20	31	29	45	38	163	3.0
SUBTOTAL	65	67	78	104	103	417	7.6

(CONTINUED)

Part of Body Affected (continued)

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
ARM(S) (ABOVE WRIST)							
ELBOW	22	20	14	28	36	120	2.2
OTHER PART	38	27	36	31	47	179	3.3
SUBTOTAL	60	47	50	59	83	299	5.4
OTHER HEAD, NECK							
NECK	22	29	21	32	34	138	2.5
OTHER PART	18	21	19	19	25	102	1.9
SUBTOTAL	40	50	40	51	59	240	4.4
EYE(S)-OPTIC NERVE, VISION	25	24	40	48	52	189	3.4
ALL OTHER PARTS, UNS	44	42	70	78	80	314	5.7
Total	953	891	1,013	1,293	1,357	5,507	100.0

12.3 Source of Injury

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
SOURCE - UNS	152	168	220	190	228	958	17.4
WOOD ITEMS-NEC							
LUMBER	107	87	43	66	59	362	6.6
OTHER SOURCE	91	71	94	122	141	519	9.4
SUBTOTAL	198	158	137	188	200	881	16.0
BODILY MOTION	100	107	100	154	159	620	11.3
MACHINES							
SAWS-MACHINE	46	37	54	84	72	293	5.3
OTHER SOURCE	46	37	24	45	59	211	3.8
SUBTOTAL	92	74	78	129	131	504	9.2
METAL ITEMS-NEC							
METAL FASTENERS	28	13	39	55	55	190	3.5
OTHER SOURCE	55	34	37	54	60	240	4.4
SUBTOTAL	83	47	76	109	115	430	7.8
WORKING SURFACES	63	44	83	107	115	412	7.5
HANDTOOLS-POWERED	42	48	33	50	38	211	3.8
FURNITURE & FIXTURES	38	40	45	36	44	203	3.7
HANDTOOLS-UNPOWERED	31	31	35	42	54	193	3.5
VEHICLES	30	24	34	46	42	176	3.2
BOXES, CONTAINERS	27	35	27	42	37	168	3.1
BUILDINGS, STRUCTURES	17	14	25	28	31	115	2.1
ALL OTHER SOURCES	80	101	120	172	183	636	11.5
Total	953	891	1,013	1,293	1,357	5,507	100.0

12.4 Type of Event

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
OVEREXERTION							
LIFTING OBJECTS	129	114	118	155	151	667	12.1
PULLING/PUSHING OBJECTS	20	25	34	39	41	159	2.9
OTHER TYPE	65	57	61	83	101	367	6.7
SUBTOTAL	214	196	213	277	293	1,193	21.7
STRUCK BY							
STRUCK BY FLYING OBJECT	18	27	121	132	148	446	8.1
STRUCK BY FALL OBJ DURING HANDLING	29	10	22	37	38	136	2.5
OTHER TYPE	162	140	68	113	95	578	10.5
SUBTOTAL	209	177	211	282	281	1,160	21.1
BODILY REACTION							
REACTION FROM VOLUNTARY MOTION	65	40	36	66	69	276	5.0
REACTION FROM INVOLUNTARY MOTION	35	35	34	40	31	175	3.2
OTHER TYPE	.	30	28	42	50	150	2.7
SUBTOTAL	100	105	98	148	150	601	10.9
CAUGHT IN, UNDER OR BETWEEN							
CAUGHT IN RUNNING/MESHING OBJECTS	39	39	41	59	58	236	4.3
OTHER TYPE	72	67	57	79	87	362	6.6
SUBTOTAL	111	106	98	138	145	598	10.9
STRUCK AGAINST							
STRUCK AGAINST MOVING OBJECT	41	24	32	55	48	200	3.6
STRUCK AGAINST STATIONARY OBJECT	23	18	30	28	33	132	2.4
OTHER TYPE	18	19	24	38	57	156	2.8
SUBTOTAL	82	61	86	121	138	488	8.9
FALL ON SAME LEVEL							
FALL TO WALKWAY, WORKING SURFACE	24	15	22	32	43	136	2.5

(CONTINUED)

Type of Event (continued)

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
FALL ON SAME LEVEL							
OTHER TYPE	22	19	35	26	32	134	2.4
SUBTOTAL	46	34	57	58	75	270	4.9
FALL FROM ELEVATION	40	39	50	59	58	246	4.5
RUBBED OR ABRADED							
ABRADED BY FOREIGN MATTER IN EYES	19	19	22	30	27	117	2.1
OTHER TYPE	13	14	1	3	3	34	0.6
SUBTOTAL	32	33	23	33	30	151	2.7
ALL OTHER TYPES, UNS	119	140	177	177	187	800	14.5
Total	953	891	1,013	1,293	1,357	5,507	100.0

12.5 Duration of Disability

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
01 - 05 DAYS LOST	428	371	481	573	582	2,435	44.2
06 - 10 DAYS LOST	122	143	167	208	194	834	15.1
11 - 15 DAYS LOST	63	60	65	90	105	383	7.0
16 - 20 DAYS LOST	45	49	41	64	59	258	4.7
21 - 30 DAYS LOST	57	58	59	78	94	346	6.3
31 - 40 DAYS LOST	41	36	31	56	66	230	4.2
41 - 50 DAYS LOST	35	33	34	36	31	169	3.1
51 OR MORE DAYS LOST	141	124	99	156	170	690	12.5
DAYS LOST-UNSPECIFIED, 0	21	17	36	32	56	162	2.9
Total	953	891	1,013	1,293	1,357	5,507	100.0

13. Characteristics Of The Injured Worker

13.1 Occupation of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
FABRICATING, REPAIR							
CABINET & WOOD FURNITURE MAKERS	79	69	61	83	93	385	7.0
LABOR-WOOD FABRICATING/REPAIRING	50	58	38	73	61	280	5.1
MECHANICS-INDUSTRIAL, FARM MACHINERY	26	30	30	33	45	164	3.0
WOOD FABRICATING/REPAIRING-NEC	38	25	26	21	41	151	2.7
LABOR-PRODUCT FABRICATING/REPAIR-NEC	29	21	22	29	28	129	2.3
OTHER OCCUPATION	27	34	30	46	50	187	3.4
SUBTOTAL	249	237	207	285	318	1,296	23.5
CONSTRUCTION OCCUPATIONS							
CARPENTERS	43	35	55	90	86	309	5.6
OTHER OCCUPATION	50	46	49	85	94	324	5.9
SUBTOTAL	93	81	104	175	180	633	11.5
PROCESSING							
LABOR-WOOD PROCESSING (NOT PAPER)	74	72	58	73	67	344	6.2
OTHER OCCUPATION	60	54	33	49	54	250	4.5
SUBTOTAL	134	126	91	122	121	594	10.8
OCCUPATION-NEC							
LABOR-NEC	44	38	57	72	156	367	6.7
OTHER OCCUPATION	17	6	7	18	19	67	1.2
SUBTOTAL	61	44	64	90	175	434	7.9
MATERIALS HANDLING-NEC							
LABOR-MATERIALS HANDLING	34	32	21	45	34	166	3.0
HANDLING EQUIPMENT OPERATORS-NEC	21	21	24	35	33	134	2.4
OTHER OCCUPATION	18	13	19	26	18	94	1.7
SUBTOTAL	73	66	64	106	85	394	7.2

(CONTINUED)

Occupation of Injured Worker(continued)

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
MACHINING							
WOOD SAWING & RELATED (NOT SAWMILL)	21	21	23	30	23	118	2.1
OTHER OCCUPATION	46	33	28	41	58	204	3.7
SUBTOTAL	67	54	51	71	79	322	5.8
ALL OTHER OCCUPATIONS, UNS	276	283	432	444	399	1,834	33.3
Total	953	891	1,013	1,293	1,357	5,507	100.0

13.2 Age of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
15-19 YEARS	78	51	86	128	101	444	8.1
20-24 YEARS	186	157	195	246	247	1,031	18.7
25-34 YEARS	349	334	373	411	441	1,908	34.6
35-44 YEARS	206	224	245	334	365	1,374	25.0
45-54 YEARS	84	81	81	125	144	515	9.4
55-64 YEARS	45	44	30	44	54	217	3.9
65 YRS AND OVER	4	.	2	3	3	12	0.2
AGE-UNSPECIFIED	1	.	1	2	2	6	0.1
Total	953	891	1,013	1,293	1,357	5,507	100.0

13.3 Length of Time Employed

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
A. LESS THAN 1 MONTH	113	86	89	165	130	583	10.6
B. 1 MONTH TO < 6 MONTHS	241	186	229	269	309	1,234	22.4
C. 6 MONTHS TO < 1 YEAR	93	113	91	154	130	581	10.6
D. 1 YEAR OR MORE	370	400	319	407	502	1,998	36.3
E. TIME-UNSPECIFIED	136	106	285	298	286	1,111	20.2
Total	953	891	1,013	1,293	1,357	5,507	100.0

13.4 Gender of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1994 TO 1998	OCCURRENCE YEAR					Total	
	94	95	96	97	98	Number	Percent
MALE	869	786	911	1,120	1,225	4,911	89.2
FEMALE	80	97	76	123	107	483	8.8
GENDER-UNSPECIFIED	4	8	26	50	25	113	2.1
Total	953	891	1,013	1,293	1,357	5,507	100.0

14. Number of Employers That Received/Renewed A CoR In 1998

	Certified Employers	Cert. & Uncert. (# of Accounts)	% Certified
Industry 25100-Sawmills & Planing Mills	17	290	5.9%
Industry 25401-Manufacture of Wood Products	2	613	0.3%
Industry 25900-Peeling & Pointing of Post	0	19	0.0%
Industry 25901-Treating of Timber	0	4	0.0%
Industry 27102-Pulp Mills	5	15	33.3%
Industry 27103-Plywood & Fiberboard Mills	2	20	10.0%
Forest Product Manufacturing	26	961	2.7%

15. Cost of Claims, Payroll & Premiums

15.1 Forest Product Manufacturing Cost

	Occurrence Year				
	1994	1995	1996	1997	1998
Transaction Year					
1994	\$2,723,297				
1995	\$1,895,526	\$2,102,220			
1996	\$1,118,179	\$1,485,999	\$2,106,012		
1997	\$660,318	\$610,758	\$1,454,715	\$3,169,286	
1998	\$759,359	\$695,636	\$814,359	\$1,791,966	\$3,397,083
Total Cost	\$7,156,678	\$4,894,613	\$4,375,086	\$4,961,252	\$3,397,083

Total Payroll	\$442,826,366	\$480,016,851	\$539,747,507	\$605,089,562	\$644,193,787
Total Premiums	\$20,678,989	\$18,082,183	\$18,352,623	\$19,614,730	\$14,496,814

The above claim cost, total payroll and premiums are for the five year period 1994 through 1998. The data is as at July, 1999.

The Claim cost amount reflect only paid cost on claims which have occurred in the five year period. These cost are tracked by year of occurrence and year that the cost were transacted. These cost are incomplete since workers compensation claim may take many years to be closed.

The payroll have been totalled for a year. The premium is the total employer's premium paid for the year.

16. Occupational Fatalities

An occupational fatality is the death of a worker which results from a work-related incident or exposure. Alberta Human Resources and Employment classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

Motor Vehicles Incidents

Motor vehicles incidents typically involve a non-industrial vehicles operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving air plane crashes, train crashes, helicopter crashes etc.

Workplace Incidents

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that Alberta Human Resources and Employment typically investigates.

Occupational Disease

Occupational disease fatalities consist mostly of diseases known to be primarily or exclusive work-related. Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Each year the Workers' Compensation Board (WCB) accepts occupational fatality claims for compensation. Claims accepted for compensation in a particular year does not mean the event or exposure happened in that year. Most of the occupational disease fatalities accepted in a particular year are the result of incidents or exposure from prior years.

Description of Forest Product Manufacturing Fatalities Accepted by The WCB Alberta, 1993-1998

Year	Occupational Disease		Motor Vehicle incident		Workplace Incident		Total	
	N	%	N	%	N	%	N	%
1993	1	20.0	0	0	4	80.0	5	100
1994	1	25.0	2	50.0	1	25.0	4	100
1995	0	0	0	0	0	0	0	0
1996	1	33.3	0	0	2	66.7	3	100
1997	0	0	1	50.0	1	50.0	2	100
1998	0	0	1	50.0	1	50.0	2	100
Total	3	18.8	4	25.0	9	56.3	16	100

17. OHS Investigated Occupational Fatalities, 1994-1998

Forest Product Manufacturers (4)

YEAR:	1994	FILE:	0800
OCCUPATION:	Canter	AGE:	49
INDUSTRY:	Sawmills and Planing Mills		
EXPERIENCE:	20 Years		

DESCRIPTION: A log become crossed in the infeed conveyor of a 4 saw Scrag. The canter left his canting position to straighten the log. The worker went and stood directly behind the sharp chain conveyor. The log became immobile in the saw causing the saw to heat up and waver violently. The wavering saw contacted the immobile cant causing it to lift up twist on its side and kickback. The cant was propelled through the air and struck the worker squarely in the chest. The worker was killed instantly.

YEAR:	1996	FILE:	0838
OCCUPATION:	Labourer - Pulp and Paper Industry	AGE:	27
INDUSTRY:	Plywood, Chipboard, Strand board and Fibreboard Mills		
EXPERIENCE:	Unspecified		

DESCRIPTION: A worker using a self-propelled elevated work platform was positioned near a large hydraulic press. The action of the press lifted the platform beyond its normal extended limits. As a result the platform tipped and the railing and hydraulics failed, causing the platform to collapse. The worker fell approximately 4.5 metres to the plant floor, sustaining fatal injuries.

YEAR:	1997	FILE:	0878
OCCUPATION:	Electrician	AGE:	42
INDUSTRY:	Plywood, chipboard, Strand board and fibreboard Mills		
EXPERIENCE:	19 years in electrical trade (Journeyman Electrician)		

DESCRIPTION: Two electricians were making adjustments to the moulding panel stacker outfeed rollcase. The stacker was operating in the automatic mode and the unit was not stopped or locked out by either electricians. One of them crawled underneath the stacker while the other placed himself on the opposite side to assist. When the adjustments were complete, the worker who was underneath the stacker started to crawl back out. The elevator of the stacker descended and pinned him against a lower cross member resulting in fatal injuries.

There was one fatality in 1998 that is still under investigation.

Appendix A: Terms, Definitions, and Formulas

Lost-Time Claim	A lost-time claim (LTC) is a claim for an occupational injury or disease which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities, and cases in which the injured worker is assigned light duties or other modified work.
Person-Years	Person-year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Labour uses these data to estimate. An average industry wage, and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.
LTC Rate	<p>The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The LTC rate represent the probability or risk of disabling injury or disease to a worker during a period of one year's work. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.</p> $\text{LTC Rate} = \frac{\text{Number of LTCs} \times 100}{\text{Estimated Person-years}}$
Duration (Days Lost)	The duration of disability is the number of days following the injury or disease for which the worker was disabled, and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Labour obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.
Duration Rate	<p>The duration rate is calculated by dividing the number of work days lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as "days lost per 100 person-years worked", and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.</p> $\text{Duration Rate} = \frac{\text{Disability Days} \times 100}{\text{Estimated Person-Years}}$
WCB Accepted Fatality	An occupational fatality is the death of a worker which result from a work-related incident or exposure and which has been accepted by the WCB for compensation. A fatality is counted in the year it is accepted.
NEC	Means "Not Elsewhere Classified"
UNS	Means "Unspecified"

Appendix B: Forestry & Related Industries 1998 Industry Codes

Forestry

3100~Logging and Woodland Operations
3902~Timber Management

Forest Product Manufacturers

25100~Sawmills and Planing Mills
25401~Manufacturing of Wood Products
25900~Peeling and Pointing of Post
25901~Treating of Timber
27102~Pulp Mills
27103~Plywood/Chipboard/Strand board Mills